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ZASHKVARA, V. V., KORSUNSKIY, M. I., LARIN, M. P., ROD'KIN, V. S., RASYAGIN, V. YE.,
KUL'DIYAROV, M. A., ~~and CHONENKO, V. N.~~, Institute of Nuclear Physics of the Kazakh
Academy of Sciences, Alma-Ata (Institut yadernoy fiziki AN Kaz SSR, Alma-Ata)

"Spectrum of Characteristic Energy Losses of Electrons in Osmium"

Leningrad, Fizika Tverdogo Tela, Vol 12, No 1, January 1970, pp 294-296

Abstract: The authors obtained a spectrum of characteristic energy losses of electrons in osmium. This is the first time this has been done and should contribute information about the third transition metal group. The spectrum was produced by reflecting an electron beam with an energy of 0.6-1.4 kev off a flat surface of a massive specimen. Energy analysis of the scattered electrons was carried out by using an electrostatic beta-spectrometer with a cylindrical field. The resolving power of the spectrometer was 0.2%. The spectrum was obtained for two different angles of scattering for the primary beam of electrons. In the first case the beam of primary electrons falls normally to the specimen surface and electrons which had been scattered at a 14-16° angle enter the beta-spectrometer. In the second case the angle between the direction of the primary beam and the specimen surface is 15-30° with electrons analyzed which had been scattered at 39°. The osmium specimen was 0.3 mm thick and was made from low-dispersion powdered osmium pressed and subsequently sintered above 2000°C in a $2 \cdot 10^{-6}$ torr vacuum for several hours. The spectrum was produced without disturbing the vacuum

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ZASHKVARA, V. V., et al., Fizika Tverdogo Tela, Vol 12, No 1, January 1970, pp 294-296

at the above temperature, with registration of electrons scattered at a 39° angle. It was shown that the osmium spectrum did not change with a fall in temperature down to 1400°C . The position of the specimen was changed for taking a spectrum at an angle of 141° . This required disturbing the vacuum. The latter spectrum was produced at a specimen temperature of 1700°C in a $2 \cdot 10^{-6}$ torr vacuum. A graph is given for the two spectra. Energy losses in electron-volts as determined from curve peaks are as follows: (141° angle of scattering) 11.4, 29.3, 46.5, 53; and (39° angle of scattering) 11.3, 24.5, 45.2, 57.4. The energy position of the first loss does not change with the angle of scattering. The ratio of the height of the first peak to the height of the second loss peak decreases as the angle of scattering increases and with increased primary beam energy. At a specimen temperature below 1300°C , the height of the first loss peak falls significantly and reaches 9.7 ev. This may be interpreted as energy lost in exciting surface plasma oscillation. At the same time, the energy loss does not coincide with theory. A significant discrepancy (on the order of 5 ev) exists in the energy position of the second loss peak. This is probably conditioned by excitation of volume plasma oscillation in the osmium for 141° and 39° scattering angles. Energy calculated for

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ZASHKVARA, V. V., et al., Fizika Tverdogo Tela, Vol 12, No 1, January 1970, pp 294-296

a volumetric plasmon using the Langmuir formula with the supposition that all eight s and d are free and form a homogeneous electron gas yields 28.6 ev. This value does not correspond to the second peak energy position obtained in this study. The origins of the remaining peaks in the osmium spectrum are also unclear.

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ZASHKVARA, V. V., KORSUNSKY, M. I., RED'KIN, V. S., Institute of Nuclear Physics, Academy of Sciences Kazakh SSR, Alma-Ata.

"Electron Characteristic Energy Loss Spectra In Ru, Rh, and Pd"

Leningrad, Fizika Tverdogo Tela, Vol 12, No 4, April 1970, pp 1270-1271

Abstract: A previous work by these three authors plus V. Ye. Masyagin (FTP, 11, 3667, 1969) discusses the electron characteristic energy loss spectra in V, Zr, Nb, and Mo obtained by the method of reflection of the primary beam of electrons with energies on the order of 1 kev for two scattering angles (39 and 141°). In the present work an analogous investigation is conducted for the metals Ru, Rh, and Pd. The results obtained, in combination with the results of the previous work, make it possible to obtain a representation of the distinctive features in the spectra of the electron characteristic energy loss in metals of all series of the second transition group (with the exception of Tc) observed for two scattering angles (39 and 141°). The method of preparing the specimens of Ru, Rh, and Pd is described. The authors thank Ya. Ye. Genkin, M. P. Larin, and V. Ye. Masyagin for assistance in fulfillment of their work. 1 graph, 1 table, 5 ref. Received by the editors 12 December 1969.

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Acc. Nr:

APO048299 Abstracting Service:
CHEMICAL ABST. 5/70

Ref. Code:

4P0181

94384q Spectrum of electron characteristic energy losses in osmium. Zashkvara, V. V.; Kornunskii, M. I.; Karlin, M. P.; Red'kin, V. S.; Musyagin, V. E.; Kudryarov, N. A.; Chokin, K. Sh. (Inst. Yad. Fiz., Alma-Ata, USSR). Izv. Tsvrd. Tela 1970, 12(1), 194-6 (Russ.). The spectrum was obtained of characteristic energy losses of electrons in Os. The spectrum was obtained by reflecting a beam of electrons with energy 0.6-1.4 keV from a plane surface of a massive specimen. The energy losses detd. from the max. of the peaks are 11.4, 39.8, 43.5, and 58 eV for a scattering angle of 141°, and 11.3, 24.5, 45.2, and 57.4 eV for a scattering angle of 39°. The peak of the 1st loss is interpreted as the loss of energy for excitation of surface plasma oscillations, and the 3nd loss, as the energy loss for excitation of vol. plasma oscillations in Os. A. Libackij

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REEL/FRAME
19792021

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CALCULATION OF THE FLUIDIZED BED LEACHING OF ZINC SINTERS WITH
CONSIDERATION OF MIXING OF THE SOLID PHASE -U-
AUTHOR-(03)-KORSUNSKIY, V.I., OYACHKO, A.G., SVETOZAROVA, G.I.

COUNTRY OF INFO--USSR *K*

SOURCE--TSVET. METAL. 1970, 43(5), 21-6

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MATHEMATIC EXPRESSION, FLUIDIZED BED, ZINC, CHEMICAL REACTION
RATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1919

STEP NO--UR/0136/30/043/005/0021/0026

CIRC ACCESSION NO--AP0132181

UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0132101
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A THEORETICAL DISCUSSION IS
CARRIED OUT ON THE RATE OF LEACHING OF SOLIDS (WITH BOTH NEUTRAL AND
ACID LIQS.) DEPENDING ON THE RATE OF LIQ. FLOW, DIAM. OF THE PARTICLES,
CONCN. OF ACID, ETC. THE NEUTRAL AND ACID LEACHING OF ZN SINTERS IS
DISCUSSED AS AN EXAMPLE, AND THE CONCLUSION IS MADE THAT CHARGING OF THE
ZN SINTER PULP FROM THE BOTTOM INTO THE FLUIDIZED BED IS MORE EFFICIENT.
AN INCREASE IN ZN EXTN. CAN BE OBTAINED EITHER BY INCREASING THE
RESIDENCE TIME OF ZN SINTER PARTICLES IN THE FLUIDIZED BED (AND THUS
REDUCING THE PRODUCTIVITY) OR BY INCREASING THE VOL OF THE BED.

UNCLASSIFIED

USSR

UDC: 681.327.66

BEKH, A. D., KORSUNSKIY, V. M., PAVLUS', B. I., CHERNETSKIY, V. V., Institute of Cybernetics of the Academy of Sciences of the Ukrainian SSR

"An Accumulator"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 5, Feb 71, Author's Certificate No 293267, Division G, filed 4 Dec 69, published 15 Jan 71, pp 170-171

Translation: This Author's Certificate introduces an accumulator which contains memory elements in the form of flat magnetic films on dielectric substrates, as well as number and digit lines and a current-conducting base. As a distinguishing feature of the patent, the effect of the number current on neighboring memory elements is reduced and the density of the memory elements is increased by adding conductors between the number lines, the ends of the additional conductors being connected to the current-conducting base.

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USSR

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UDC: 536.4:621.791.85

DERKACH, V.P., KORSUNSKIY, V.M., and MEDVEDEV, I.V.

"The Kinetics of Thermal Processes Involved in Electron-Beam Alloying of Silicon"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 2, Mar-Apr 70, pp 14-24

Abstract: The problem of computing temperature fields in semiconductors during electron-beam alloying is formulated. Thermal conductivity is handled on an approximation basis (assuming a Gaussian distribution of energy over radius and depth, an independence of thermal and physical parameters from temperature, the conductor as a semi-infinite body with an adiabatic boundary, etc. Formulas are derived to correspond to single and double electron-beam pulses or series of pulses, and to steady-state and transitional temperature fields during "constant" alloying. The control of thermal processes by regulating the energy and time parameters of the beam is illustrated by calculations.

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USSR

UDC 615.277.3:547.857].012.1

KORSUNSKII, V. S., and GOLOVCHINSKAYA, YE. S., All Union Scientific Chemical Pharmaceutical Research Institute Imeni S. Ordzhonikidze, Moscow

"Syntheses in the Purine Series. XXIX. 8- and 2-Diethyleneimidophosphamido-purines"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 6, Jun '72, pp 28-31

Abstract: A series of 8-diethyleneimidophosphamido-purines was synthesized by heating 2,6-dichloro-8-amino-7-methylpurine (I) with excess dimethylamine to yield an intermediate product -- 2-chloro-6-dimethylamino-8-amino-7-methylpurine (II), m.p. 249-252°. (I) could be obtained from 2,6,8-trichloro-7-methylpurine, which in turn was synthesized in high yield from theobromine and PCl_3 . Reaction of (II) with phosphorus oxychloride followed by condensation with ethyleneimine in presence of triethylamine gave the following derivatives: 8-diethyleneimidophosphamido-7-methylpurine (III), dec. > 270°, 2-chloro-6-dimethylamino derivative of (III), dec. > 300°, 2-chloro-6-morpholino derivative of (III), dec. > 300°, 6-morpholino derivative, and 6-piperidino analogue of (III), m.p. 242-246°. 2-Diethyleneimidophosphamido-6-methylamino-7-methylpurine, m.p. 150-152° was obtained from 7-methylguanine in a similar fashion. None of these compounds showed any significant antitumor activity.

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UNCLASSIFIED//~~CONFIDENTIAL~~ PROCESSING DATE--02 OCT 70

TITLE--ON THE LARGE SCALE INTERACTION BETWEEN THE OCEAN AND THE ATMOSPHERE

-U-

AUTHOR--KORT, V.G.

K

COUNTRY OF INFO--USSR

SOURCE--OKEANOLOGIYA, 1970, VOL 10, NR 2, PP 222-239

DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--OCEAN CIRCULATION, ATMOSPHERE, ATMOSPHERIC BOUNDARY LAYER,
ATMOSPHERIC CIRCULATION, INTERACTION, OCEAN, OCEAN TEMPERATURE,
ATMOSPHERIC TEMPERATURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1283

STEP NO--UR/0213/7D/010/002/0222/0239

CIRC ACCESSION NO--AP0109367

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0109367

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROCEEDING FROM THE DATA ON THE THERMAL REGIME OF THE NORTH PACIFIC CIRCULATION SYSTEM, THE EFFECT OF THE YEAR TO YEAR OSCILLATIONS OF HEAT CONTENT OF THE BAROCLINIC LAYER OF THE OCEAN ON THE THERMAL STATE OF THE ATMOSPHERIC BOUNDARY LAYER IS ANALYZED. THE ROLE OF THE ANNUAL (SEASONAL) AND YEAR TO YEAR HEAT CONTENT OSCILLATIONS IS ESTIMATED AS PART OF THE LARGE SCALE THERMAL AND DYNAMIC INTERACTION BETWEEN THE OCEAN AND THE ATMOSPHERE. HEAT ADVECTION BY THE SEA CURRENTS IS OF SIGNIFICANCE IN THIS PROCESS, AND THE OCEANIC AND ATMOSPHERIC CIRCULATIONS ARE INTERRELATED.

FACILITY: INSTITUT OKEANOLOGII IM. P. P. SHIRSOVA AN SSSR.

UNCLASSIFIED

1/2 015

UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--ON THE LARGE SCALE INTERACTION BETWEEN THE OCEAN AND THE ATMOSPHERE

-U-

AUTHOR--KORT, V.G.

COUNTRY OF INFO--USSR

SOURCE--OKEANOLOGIYA, 1970, VOL 10, NR 2, PP 222-239

DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--OCEAN CIRCULATION, ATMOSPHERE, ATMOSPHERIC BOUNDARY LAYER,
ATMOSPHERIC CIRCULATION, INTERACTION, OCEAN, OCEAN TEMPERATURE,
ATMOSPHERIC TEMPERATURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1283

STEP NO--UR/0213/7D/010/002/0222/0239

CIRC ACCESSION NO--AP0109367

UNCLASSIFIED

THE YEAR TO YEAR OSCILLATIONS OF THE THERMAL STATE OF THE ATMOSPHERIC BOUNDARY LAYER IS
OF THE OCEAN ON THE THERMAL STATE OF THE ATMOSPHERIC BOUNDARY LAYER IS
ANALYZED. THE ROLE OF THE ANNUAL (SEASONAL) AND YEAR TO YEAR HEAT
CONTENT OSCILLATIONS IS ESTIMATED AS PART OF THE LARGE SCALE THERMAL AND
DYNAMIC INTERACTION BETWEEN THE OCEAN AND THE ATMOSPHERE. HEAT
ADVECTION BY THE SEA CURRENTS IS OF SIGNIFICANCE IN THIS PROCESS, AND
THE OCEANIC AND ATMOSPHERIC CIRCULATIONS ARE INTERRELATED.
FACILITY: INSTITUT OKEANOLOGII IM. P. P. SHIRSHOVA AN SSSR.

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"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002201510014-5

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UNCLASSIFIED

PROCESSING DATE--02 OCT 70

CIRC ACCESSION NO--AP0109367

ABSTRACT. PROCEEDING FROM THE DATA ON THE

ABSTRACT/EXTRACT--(U) GP-0-

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002201510014-5"

USSR

NIKOLAYENKO, M. R?, et al., Svarochnoye Proizvodstvo, No 4, April 73, pp 32-34

alloys with B, V, and Ni, the alloy containing (in %) 2.6 C, 24 Cr, 0.6 E,
1.6 V, 1.5 Ni, 2-8-3.2 Mn and 0.9-1.2 Si possesses optimum properties.
One figure, two tables, five bibliographic references.

2/2

1/2 030 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--THE TEMPERATURE OF THE WELD POOL DURING SEAM WELDING WITH SINTERED
ELECTRODE -U-
AUTHOR-(03)-KORTELEV, G.A., NIKOLAYENKO, M.R., SHEVCHENKO, G.D.

COUNTRY OF INFO--USSR

SOURCE--SVAR. PROIZV., JAN. 1970, (1), 2-3

DATE PUBLISHED----JAN70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, METHODS AND EQUIPMENT

TOPIC TAGS--SEAM WELDING, TEMPERATURE DISTRIBUTION, THERMOCOUPLE, WELDING
ELECTRODE, WELD ZONE, LIQUID METAL PROPERTY, SINTERED ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1279

STEP NO--UR/0135/70/000/001/0002/0003

CIRC ACCESSION NO--AP0136685

UNCLASSIFIED

2/2 030
CIRC ACCESSION NO--AP0136685

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD USED TO STUDY THE TEMP. DISTRIBUTION IN THE WELD POOL DURING SEAM WELDING IS DESCRIBED AND THE APPARATUS ILLUSTRATED. MEASUREMENTS WERE MADE BY FIVE (W-MO MINUS 5 PERCENT AL) THERMOCOUPLES, SHIELDED BY QUARTZ TUBES, IMMERSSED IN THE BATH AT DIFFERENT POINTS AND CARRIED BY THE WELDING ELECTRODE. RESULTS FOR DIFFERENT WELDING CONDITIONS ARE PRESENTED IN GRAPHICAL FORM.

UNCLASSIFIED

Acc. Nr: AP0045596

Ref. Code:

UR 0497

PRIMARY SOURCE: Klinicheskaya Meditsina, 1970, Vol 48,

Nr 2, pp 98-102

THE REMOTE RESULTS OF CORTICOSTEROID THERAPY
OF PATIENTS WITH INFECTIOUS HEPATITISKortev, A. I.; Lyasheva, A. P.; Taras, V. V.

Summary

The authors examined 318 patients convalescing from infectious hepatitis in periods up to five years who were subjected to steroid (198 cases) and routine detoxification (120 cases — control) therapy. After steroid therapy recovery ensued in 65.9 per cent of patients, in the control group — in 53.6 per cent. Hormone therapy reduces the incidence of formation of chronic hepatitis. There was not a single case of liver cirrhosis, whereby the number of relapses decreased by 2½ times. Under the influence of steroids there was seen a marked tendency to normalization of the metabolism of trace elements (copper, cobalt, tungsten and manganese) studied colorimetrically, this being less noticeable in routine therapy, however, their content in the blood, urine and feces after an acute stage of the disease does not reach normal values. The accumulation of cobalt and tungsten in the blood of convalescents within 12 months was noted in persons with residual manifestations of hepatitis, moreover, the level of cobalt was above normal by 103.5 per cent, that of tungsten — by 41.1 per cent, whereas in persons with chronic hepatitis a distinct eupremia was observed.

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REEL/FRAME
19780573

USSR

UDC 528.514

NEVEROV, L. A., KORTEV, N. V., LARIONOVA, T. A., MITROFANOV, V. V.,
MILASHEVSKIY, A. K., POPOV, YU. V., Candidate of Sciences,
RYZHENKO, B. V.

"The New KDG-3 Phototachymeter With Semiconductor Emission
Source"

Leningrad, Optiko-mekhanicheskaya Promyshlennost', No 9, Sep '70,
pp 35-39

Abstract: The authors describe the operating principle, optical system, construction and test results of the first serially produced phase phototachymeter with gallium arsenide diode as the emission source. The instrument can be used to measure distances of up to 2 km with an error of no more than 15 mm over its entire range. Measurement time is 10-15 minutes. The instrument is equipped with thermostatic control and can be used at temperatures from -50 to +50°C. Power consumption is no more than 5 watts.

UDC 621.374.33

USSR

VIGDORCHIK, V. G., DARKOV, S. K., ~~KORTENA T. V.~~, MEYERSON, S. I., POPOV,
V. A., SITNIKOV, O. P., TRYKOV, Yu. V., OSTRYY, Kh. Ya.

"A Magnetic Digital Element"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
No 21, Jul 71, Author's Certificate No 308518, Division H, filed 16 Feb 70,
published 1 Jul 71, pp 207-208

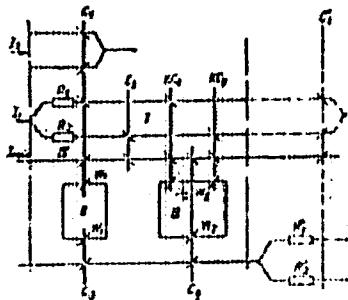
Translation: This Author's Certificate introduces a magnetic digital element which contains information, compensation and two switching cores. The device has a recording circuit, a coupling loop with flux quenching on resistors, and a ready circuit for the switching cores. As a distinguishing feature of the patent, in order to increase speed, improve stability, extend the range of ambient temperature variation and simplify the power supply system, the element is equipped with resistors in the coupling loop, dynamic excitation and dynamic magnetizing cores, one additional winding on each of the switching and compensation cores, and also two additional windings on the information core. The primary windings of the dynamic excitation and dynamic magnetizing cores are connected in series in the circuit of one of the cadence currents. The series-connected auxiliary windings of the switching cores and

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VIGDORCHIK, V. G., et al., Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 21, Jul 71, Author's Certificate No 308518, Division H, filed 16 Feb 70, published 1 Jul 71, pp 207-208

the secondary winding of the dynamic excitation core form a loop for dynamic excitation of the switching cores. The series circuit comprised of the secondary winding of the dynamic magnetizing core and one of the auxiliary windings of the information core forms a loop for dynamic excitation of the information core, and the auxiliary winding of the information core and the third winding of the dynamic excitation core are connected in series to the ready winding of the switching core.



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Nuclear Science and Technology

USSR

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UDC: 669.822.476

KURBATOV, D. I., KORTEVA, Z. P.

"Determination of the number of electrons in the Reduction of U (VI) on a Dropping Mercury Cathode in Phosphoric Acid Solutions of Various Concentrations"

Tr. in-ta khimii. Ural'skiy fil. AN SSSR (Works of the Institute of Chemistry, Ural Affiliate of the Academy of Sciences of the USSR), 1970, vyp. 17, pp 190-194 (from RZh-Metallurgiya, No 10, Oct 70, Abstract No 10 G193)

Translation: The process of reducing hexavalent uranium in phosphoric acid solutions of various concentrations is irreversible. The method of polarographic coulometry as well as an investigation of the relationship $\log k\cdot E$ shows that hexavalent uranium in phosphoric acid solutions with acid:water ratios of 8:2-2:9 (by volume) is reduced in a single stage with participation of a single electron yielding pentavalent uranium. Bibliography of nine titles. G. SVODTSEVA.

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USSR

UDC 532.517.4:532.526

KORTIKOV, N. N., ZHIVOV, M. Z., and SOKOVISHIN, Yu. A., Leningrad Polytechnic Institute imeni M. I. Kalinin

"A Wall Jet on a Curved Surface"

Minsk, Inzhenerno-Fizicheskiy Zhurnal, Vol 22, No 5, 1972, pp 831-884

Abstract: The paper deals with the propagation of a two-dimensional jet of incompressible fluid on a curved surface, spurting from a thin slit into a space occupied by the same fluid. The calculations are conducted by numerical methods by means of the profile used by N. I. Akatnov for a two-dimensional wall jet in the initial cross section. The calculation results are processed in the form of dimensionless profiles of the velocity and friction stress on the wall. It is shown that restructuring of the boundary layer takes place in the initial cross section. The calculation results are compared with those obtained by the method of perturbations. The low exactness of the method of perturbations is shown. 1 figure. 6 references.

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UR 0482

Soviet Inventions Illustrated. Section II. Electrical, Derwent,
243981 ACOUSTIC FIELD INTENSITY MEASURING DEVICE

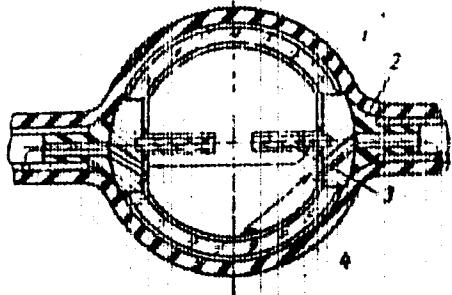
pickup for, comprising a piezoelectric element (1), which is a pressure pickup and is suspended in the elastic wave field by two flexible suspensions (2). Two identical bimorph piezo-accelerometers (3) with their electrodes connected in parallel, are mounted on its inner surface at opposite points of a diametral plane. The piezo-accelerometers (3) signal is, after integration with respect to time, proportional to the piezoelement (1) oscillating vibrations velocity, and therefore, to the liquid particles oscillation velocity.

The electric signal from the spherical piezoelectric element (1) and the piezoaccelerometers (3) integrated signal are applied to a multiplying device whose signal is proportional to the intensity of the acoustic wave in the examined field area. In order to reduce the cavitation effect on the pickup, the latter is placed in an elastic rubber envelope (4).

27.7.67 as 1177992/18-1Q. KOBENSKIY, V. et al. 4104.
ODESSA POLYTECHNIC. (8.10.69) Bisl 17/14.1.69.
Class 42a. Int.Cl.B 06b.

19771326

AA0044633



AUTHORS: Kortnev, A. V.; Davidenko, L. A.

Odesskiy Politekhnicheskiy Institut

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19771327

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USSR

UDC 537.533:666.22

KORTOV, V. S., Candidate of Sciences, GAPRINDASHVILI, A. I., RABINOVICH,
L. V., Candidate of Sciences

"Exoelectron Emission of Polished Optical Glass"

Optiko Mekhanicheskaya Promyshlennost', No 12, 1972, pp 59-60.

Abstract: Results are presented from a study of the emission of a batch of glass (K108) subjected to deep and ordinary polishing. Exoelectron emission was measured in a vacuum of $5 \cdot 10^{-6}$ torr using a secondary electron multiplier as an electron detector. The pulling electric field was created by holding a grid carrying a positive potential of 10 v at a distance of 1 mm over the surface of the specimen. Measurements indicated electron emission with a peak at about 200°C. The exoelectron emission of polished glasses indicated that mechanical working creates metastable active centers on the surface. The polishing mode influences not only the number of defects formed on the surface but their physical nature as well.

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Analysis and Testing

USSR

K UDC 535.211:537.531

KORTOV, V. S., MINTS, R. I., PETUKHOVA, T. N., Sverdlovsk

"The Effect of Laser Action on Exoelectronic Emission from Metallic Surfaces"

Moscow, Fizika i Khimiya Obrabotki Materialov, № 1, Jan-Feb '70,
pp 3-7

Abstract: Exoelectronic emission (the Cramer effect) is widely used in the study of plastic deformation and of structural and phase transformations in the surface layers of solids. Using a secondary-emission multiplier in a 10^{-5} mm Hg vacuum, the authors measured thermostimulated exoemission from the surface of pure Au, Pt, Pd, and Ni and from austenitic alloys 1Kh18N9T and 4ON25 when subjected to pulsed laser action. Maximum exoemission appeared in the 100-300°C range. Relief and interferometric data established a connection between the parameters of exoemission and the structural changes in the metallic surfaces. It is suggested the present method may be used to study locally deformed portions of metallic surfaces.

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Acc. Nr:

AP0048292Abstracting Service:
CHEMICAL ABST. ✓ 70Ref. Code:
UR 0472

K

✓ 94402u Effect of laser action on exoelectron emission from the surface of metals. Kortov, V. S.; Mints, R. I.; Petukhova, T. M. (USSR). *Fiz. Khim. Obrab. Mater.* 1970, (1), 3-7 (Russ). The effect of laser action on the surface of pure Au, Pt, Pd, Ni, and of alloys 1Kh18N9T and 40N25 was studied by the exoelectron emission method described previously (Kortov, et al., 1966). No emission was observed at room temp. At higher temps. thermoemission passed through a max. Pt and Pd exhibited 2 peaks at different temps. Emission was due to laser action. Cracks and changes in relief and stresses occurred on the surface. The peaks of deformed specimens exposed to air decreased. This might be due to relaxation of stresses as well as to the deactivation of structural defects on the surface.

GBJR

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REEL/FRAME
19792014

USSR

UDC 548.4

MINTS, R. I., KORTOV, V. S., MELEKHIN, V. P., KISLITSIN, Ye. A.,
PLEKHANOVA, E. A., and PESHCHIN, G. F., Ural Polytechnic Institute
imeni S. M. Kirov

"Effect of Deformation on Electron Work Function and Exoemission From
Surface of Noble Metals"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 7, 1970,
pp 37-42

Abstract: The article describes results of a study of regularities in the exoemission effect in the deformation of noble metals (silver, gold, platinum, and palladium). Changes in the electron work function and exoelectronic emission of the metals were studied under various types of deformation (tension, grinding, polishing). The electron work function was studied by measuring the contact potential difference by the dynamic capacitor method. The results indicate that plastic deformation due to surface tension and machining is accompanied by a decrease in the electron work function. This means that there is a

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MINTS, R. I., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy --
Fizika, No 7, 1970, pp 37-42

decline in the potential barrier value and an increase in the probability of electron emission. This effect manifests itself in the appearance of exoelectronic emission, the intensity of which depends on the degree of deformation. Simultaneous measurement of these quantities makes it possible to establish the interrelationship between the changes observed in the surface electric properties and disturbance of the surface structure and the physicochemical processes initiated by deformation.

2/2

1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EPITAXIAL GROWTH OF SILVER ON ELECTRICALLY HETEROGENEOUS SURFACES
OF SODIUM CHLORIDE CRYSTALS -U-
AUTHOR-(04)-DISTLER, G.I., LEBEDEVA, V.N., MOSKVIN, V.V., KORTUKOVA, YE.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERO. TELA 1970, 12(4), 1149-54

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--EPITAXIAL GROWTH, SILVER, SODIUM CHLORIDE, METAL CRYSTAL,
CRYSTAL SURFACE, CRYSTAL ORIENTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0377

STEP NO--UR/0181/70/012/004/1149/1154

CIRC ACCESSION NO--APO126132

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0126132

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY ELECTRON MICROSCOPY, THE EPITAXIAL GROWTH WAS STUDIED OF AG ON ELEC. HETEROGENEOUS SURFACES OF NaCl CRYSTALS CONTG. 0.15 WT. PERCENT PbCl SUB2. AT CRYSTAL TEMPS. OF 100 AND 150DEGREES THE CRYSTAL SURFACES ARE DECORATED BY INCLUSIONS OF THE PbCl SUB2 PHASE SURROUNDED BY DOUBLE ELEC. LAYERS. ON THE SURFACE OF THESE DOUBLE ELEC. LAYERS, CHARGED NEG., ORIENTATION COALESCENCE OF AG CRYSTALS TAKES PLACE INITIALLY, WHICH DETS. THE PARALLEL ORIENTATION (100) SUBAG MAGNITUDE OF (100) SUBNaCl, WHILE ON THE REST OF THE SURFACE MIXED ORIENTATION (100)(111) SUBAG MAGNITUDE OF (100) SUBNaCl IS OBSD. AT 200DEGREES ON THE SECTIONS OF IMPURITY ENRICHED NaCl CRYSTALS, COALESCENCE OF AG PARTICLES WAS OBSD., WHICH CAUSED THE APPEARANCE OF MIXED ORIENTATION, WHILE AG CRYSTALS ON THE REMAINDER OF THE SURFACE WERE DISTRIBUTED HETEROGENEOUSLY. UNDER IDENTICAL CONDITIONS OF CRYSTN. (CRYSTAL TEMP., RATE OF CONDENSATION, DEGREE OF VACUUM), THE DETG. ROLE IN THE EPITAXIAL GROWTH IS PLAYED BY THE ELEC. RELIEF OF THE SURFACE OF THE CRYSTALS, AND THE ORIENTATIONAL COALESCENCE OF THE PREVIOUSLY FORMED PARTICLES TAKES PLACE PRIMARILY ON NEG. CHARGED SECTIONS OF THE CRYSTAL SURFACE.

FACILITY: INST. KRISTALLOGR., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 612.017.1.014.2:612.118.221.3

KORUKOVA, A. A., Laboratory of Immunological Tolerance, Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Medical Sciences USSR

"Modification of the Method of Local Passive Hemolysis in Gel to Detect Cells Producing Antibodies to *S. typhi* Vi Antigen"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 12, 1971, pp 103-104

Abstract: Agarose gel containing sheep erythrocytes sensitized by Vi antigen is poured into test tubes to which is added a suspension of mouse spleen cells. The mixture is then distributed evenly on preheated Petri dishes. After the gel congeals, the dishes are incubated for 2 hours at 37°C, guinea pig complement is added, and incubated for another hour at 37°C, after which the number of plaques formed is counted. Study of the dynamics of the immune response of mice to the soluble *S. typhi* Vi antigen showed that the number of antibody-forming cells increased rapidly in the spleen, peaking on the 4th day and decreasing sharply thereafter.

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1/2 033

UNCLASSIFIED

PROCESSING DATE--15NOV70

TITLE--YIELD OF METAL SUBSTANCE FOR METALS EXPOSED TO THE ACTION OF LASER

RADIATION -U-

AUTHOR--(141)--KURUNCHIKOV, A.I., PANTELEYEV, V.V., PUTRENNOK, O.I.,

YANKOVSKIY, A.A.

COUNTRY OF INFO--USSR

K

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(5), 819-23

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--BIBLIOGRAPHY, LASER THERMAL EFFECT, METAL SURFACE PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--300671425

STEP NO--UR/0368/70/012/005/0319/0423

CIRC ACCESSION NO--AP0135079

UNCLASSIFIED

2/2 033

UNCLASSIFIED

PROCESSING DATE--18NOV70

CIRC ACCESSION NO--AP0135099

ABSTRACT/EXTRACT--(U) CP-0- ABSTRACT. A REVIEW WITH 13 REFS., CONTG. DATA ON THE EFFECTS OF LASER RADIATION FOCUSED ON SN, PB, IN, RU, AL, CU, NI, FE, MO, W, AND C TARGETS.

UNCLASSIFIED

USSR

UDC 620.1.539.4

KORUNOV, Yu. I., BARESKOV, N. A., Moscow

"Mechanical Properties of Soldered Joints of Certain Alloy Steels at Low Temperatures (Down to -253°C)"

Kiev, Problemy Prochnosti, No. 4, Apr 71, p. 49-52.

Abstract: Results are presented from studies of the mechanical properties (separation and shear strength and impact toughness) at temperatures of 20, -196 and -253 °C of soldered joints of type Kh18N10T steel, made using solder based on silver (PSrMtsMN-87, PSr-72, PSrMN-39, PSrMnts-38, PSr-37.5), copper (BrOF6.5-0.16; PMNTS 5.5-11.5; PM-17) and manganese plus nickel (G40NKh, G70NKh, PZhK55), as well as the joints of type EP222 steel, made using solder types PSrMNTS-38; PSr-37.5; G40NKh; G70NKh and PM-17. Also, an attempt is made to estimate the ductility of the soldered joints in Kh17N10T steel from the absolute elongation taken from primary stress diagrams.

It is established that the separation and shear strength of soldered joints of types Kh18N10T and EP222 steel made with all of the solders mentioned above increase with decreasing test temperature from 20 to -250°C, while the ductility and impact toughness decrease. The best combination of plastic, impact and strength properties for joints of Kh18N10T steel is achieved using solders types PSr-37.5 and PM-17.

1/1

1/2 014 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ALKYLATION OF BENZENE BY N-OCTENES IN THE PRESENCE OF ETHYLALUMINUM
DICHLORIDE AND A COMPLEX OF BORON FLUORIDE WITH POLYPHOSPHORIC ACID -U-
AUTHOR--(03)-LESMENT, T., LIIV, T., KORY, M.

COUNTRY OF INFO--USSR

SOURCE--ESTI NSV TEAD. AKAD. TIOM., KEEM., GEOL. 1970, 19(1), 46-51

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYST, ALKYLATION, BENZENE, ORGANALUMINUM COMPOUND,
CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE, OCTANE, ISOMERIZATION,
CHEMICAL REACTION RATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0707

STEP NO--UR/0470/70/019/001/0046/0051

CIRC ACCESSION NO--A00113571

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0113571

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTANT AND CATALYST RATIOS AND REACTION TIME DURING ALKYLATION OF C SUB6 H SUB6 BY 1-OCTENE (I) AT 20DEGREES WERE STUDIED. ADDING I DROPWISE TO C SUB6 H SUB6 ON ETALCL SUB2 DURING 10 MIN, AND STIRRING THE RESULTING MIXT. 10 MIN GAVE 100PERCENT CONVERSION I: 64.6PERCENT 2,PHENYLOCTANE (III), 24PERCENT 3,PHENYLOCTANE (III), AND 11.4PERCENT 4,PHENYLOCTANE (IV). WHEN PART OF THE C SUB6 H SUB6 WAS RESERVED FOR ADDN. WITH I TO THE CATALYST, A DECREASE IN THE OLEFIN C SUB6 H SUB6 RATIO FROM 1:2 TO 1:16 DID NOT AFFECT THE ISOMERIC PRODUCT COMPN., BUT AN INCREASE TO 1:0.5-1 REDUCED THE RELATIVE YIELD OF II. WHEN BF SUB3 POLYPHOSPHORIC ACID WAS USED AS CATALYST, THE ISOMERIZING EFFECT WAS STRONGER, AND THE RELATIVE YIELD OF DIPHENYLOCTANES WAS RAISED APPRECIABLY, AND THE MAX. PHENYLOCTANE YIELD (60.4PERCENT) CORRESPONDING TO A II-III-IV RATIO OF 35:36.2:28.8 WAS OBTAINED AT A CATALYST OLEFIN RATIO OF 0.724:1.94, A REACTION TIME OF 240 MIN, AND 95.6PERCENT I CONVERSION. WHEN 4-OCTENE (VI) WAS SUBSTITUTED FOR I, THE BF SUB3 POLYPHOSPHORIC ACID CATALYST OLEFIN RATIO WAS 2.84:5.24, AND V CONVERSION WAS 84.8PERCENT AT THE END OF 20 MIN; THE II-III-IV RATIO WAS 27.5:39.7:32.8 AND THE MONOPHENYLOCTANE YIELD WAS 63.5PERCENT.

FACILITY: INST. KHM., TALLIN, USSR.

UNCLASSIFIED

1/2 031 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THERMODYNAMICS OF BS SUB2 VAPORIZATION -U-

AUTHOR--(031)-GRINBERG, YA.KH., ZHUKOV, E.G., KOBZAIKIN, V.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(3), 589-92

DATE PUBLISHED-----70

K

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THERMODYNAMICS, VAPORIZATION, BORON COMPOUND, SULFIDE,
ABSORPTION SPECTRUM, MONTE CARLO METHOD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/1133

STEP NO--UR/0020/70/190/003/0589/0592

CIRC ACCESSION NO--AT0116598

UNCLASSIFIED

2/2 031 UNCLASSIFIED PROCESSING DATE--16OCT70
CIRC ACCESSION NO--AT0116598
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE VAPORIZATION OF CRYST. BS SUB2 HAS STUDIED BY MEASURING THE PRESSURE OF THE SATD. AND UNSATD. VAPOR AT 550-1100DEGREES AND BY ANALYZING THE ELECTRONIC ABSORPTION SPECTRUM. THE EQUIL. CONSTS. (KAPPA SUB1) SUBN WERE CALCD. FOR THE DISSOCN. (BS SUB2) SUBN (GAS) YIELDS NBS SUB2 (GAS) FOR N EQUALS 1-3 BY USING THE MONTE CARLO METHOD FOR 9 TEMPS. AT 50DEGREES INTERVALS IN THE RANGE 550-950DEGREES. THE TEMP. DEPENDENCE OF KAPPA SUB1 IS GIVEN FOR N EQUALS 2 AND 4. THE THERMODYNAMIC ANAL. SHOWED THAT THE MAIN COMPONENTS OF THE SATD. VAPOR AT GREATER THAN 550DEGREES ARE BS SUB2, (BS SUB2) SUB2, AND (BS SUB2) SUB4. FACILITY: INST. OBSHCH. NEORG. KHM. IM. KURNAKOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

KORYACHKO, V. P., MAMATOV, Yu. A., SHUVIKOV, V. I.

"Selection of the Optimal Structure of Operational Automata of Control Machines"

Tr. Ryazan. Radiotekhn. In-ta. [Works of Ryazan Institute of Electronic Engineering], 1972, No 36, pp 73-78 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V781 by the authors).

Translation: Problems of selection of a structure of an operational automaton (OA) for an oriented digital control machine (ODCM) and the speed of each of the units are studied. It is shown that the task of selection of the optimal structure for the OA of an ODCM is equivalent to the problem of linear programming.

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USSR

UDC: 8.74

KORYACHKO, V. P., MAMATOV, Yu. A., SHUVIKOV, V. I.

"Agreement of Job Algorithm and Structure of Operational Automaton of Oriented Machine"

Kibern. Tekhn. [Cybernetics Equipment--Collection of Works], Kiev, 1971, pp 45-53 (Translated from Referativnyy Zhurnal Kibernetika, № 11, 1972, Abstract No 11V572, by V. Mikheyev)

Translation: The following related problems are discussed: 1) define the algorithm, structure of operational automaton for an oriented digital machine (OA ODM) and schedule of operation of each section to minimize error probability and hold OA ODM cost below a fixed level; 2) define the algorithm, structure of OA ODM and operating schedule of each section such that the cost of the OA ODM is minimal and the probability of a failure is not over a fixed level. The tasks are presented as mathematical programming tasks in which both the goal function and the limitations are linear.

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USSR

UDC: 681.3

KORYACHKO, V. P.

"Search for Optimum Structures of Digital Automatic Devices by the Methods of Graph Theory"

Tr. Ryazan. radiotekhn. in-ta (Works of the Ryazan Radio Engineering Institute), 1970, vyp. 29, pp 136-141 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V779)

Translation: A method is proposed for determining the optimum structures of digital automatic devices. The method is based on breaking up the multigraph of the automaton into unconnected subgraphs and determining the Hamiltonian paths of minimum length for each subgraph and the entire multigraph as a whole. The method appreciably reduces the dimensionality of the equivalent problem of whole-number linear programming, which enables more effective use of computer facilities in designing the structures of digital automatic devices. V. Makheyev.

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USSR

KORYACHKO, V. P., SHUVIKOV, V. I.

"Optimization of Programs for Digital Machines"

Ob Optimizatsii Programm Tsifrovyykh Mashin. [English Version Above], Riga, 1972, 7 pages (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V692 DEP, by the authors).

Translation: In development of programs for digital computers and planning of microprogram control automata, one of the most important problems is separation of repeating portions of programs (subroutines) in order to minimize program length. It is suggested that this problem be solved by a heuristic iterative algorithm, one step of which involved synthesis of the next subroutine S_k by combination of elements (instructions) from the main program or earlier formulated subroutines and subdivision of subroutines, the application of which becomes unsuitable after separation of S_k . The algorithm is presented in the form of a series of successive transforms of a certain matrix. Formal rules are presented for changing the elements of the matrix with each transform. The conditions of suitability of separation of

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USSR

Koryachko, V. P., Shuvikov, V. I.

Ob Optimizatsii Programm Tsifrovых Mashin., Riga, 1972, 7 pages.

subroutine S_k , consisting of several subroutines, are defined. A step-by-step description of the algorithm is presented.

USSR

UDC: 681.3

KORYACHKO, V. P.

"A Method of Defining Quasi-Optimum Structures of Automatic Digital Systems"

Tr. Ryazan. radiotekhn. in-ta (Works of the Ryazan Radio Engineering Institute), 1970, vyp. 29, pp 129-135 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V544)

Translation: A formalized method is proposed for designing quasi-optimum structures of automatic digital systems which boils down to solving an equivalent multiple-target problem in mathematical programming. An algorithm is presented for solving the multiple-target problem. Author's resumé.

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UDC 6.74

USSR

KORSHUNOV, YU. M., KORYACHKO, V. P.

"Selecting the Optimal Structure of Operation Automata".

V sb. Teor. kibernetika (Cybernetics Theory-collection of works), Kiev, 1971,
pp 151-160 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V413)

Translation: A procedure is proposed for synthesis of the optimal structure of an operation automaton O which is a finite or infinite Muhr automaton which includes a set of elements receiving, storing and converting multibit information words (adders, registers, memories, converters, and so on). The problem of synthesizing the optimal structure of the automaton O is formulated in the following way: select the set of elements and the set of microprograms satisfying the limiting parameters: weight, size, cost, speed, and so on and minimizing the total "loss" of all parameters. The solution of the problem reduces to the problem of integral programming. The "loss" of the element parameters with respect to the parameters of the "ideal" element is characterized by a specially derived estimator.

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UDC 8.74

USSR

KORSHUNOV, YU. M., KORYACHKO, V. P.

"problems of Estimating Parameters when Designing Digital Control Computers"

V sb. Kibern. tekhn. (Cybernetic Engineering -- collection of works), Kiev, 1971,
pp 39-44 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 94570)

No abstract

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USSR

UDC 621.357.12:661.418(088.8)

(5)

EBERIL', V. I., YELINA, L. M., SHKRED, V. V., TSEYTLIN, R. I., YURKOV, L. I.,
GURVANOV, L. S., KORYAGIN, V. I., PANCHENKO, M. B., and SHANTALIN, A. M.

"Process of the Decomposition of Active Chlorine in Solution"

USSR Authors' Certificate No 335211, filed 20 Jun 60, published 15 May 72
(from Referativnyy Zhurnal -- Khimiya, No 8, (II), 1973, Abstract No 8L254P)

Translation: A process is patented for the dissociation of active chlorine in solutions by means of heating, which is distinguished in that, in order to increase the velocity of dissociation, a process occurs in order to maintain a stable pH value for the solution equal to 5.5 to 6.5. It is proposed to carry out the process by bubbling gases which have been pre-heated and humidified to 60-100% (relative to the temperature of the solution). The value of the pH of the solution during the process stays in the region 5.5 to 6.5 by the addition of alkaline or alkali salts to the solution. The temperature of the solution is confined to the region 60-100°C. The process is carried out either as a batch or as a continuous system, for example, for the flow of the pre-heated solution across a step-wise capacity pattern. The solution is made alkaline at the beginning of the process; that is, the most rapid reduction in the pH of the solution occurs during the first stage of the pro-
1/2

- 4 -

USSR

EBERIL', V. I., et al., USSR Authors' Certificate No 135211, filed 20 Jun 60,
published 15 May 72

cess when velocity of dissociation of the active chlorine is highest. From
50-100% of the alkali reagents supplied in the solution are introduced during
the first 60 minutes of the process.

(5)

2/2

USSR

UDC 621.3.023:669.295

TROITSKIY, V. N., AYVAZOV, M. I., KUZNETSOV, V. M., and KORYAGIN, V. S.,
Institute for New Chemical, Academy of Sciences USSR

"APPLICATION OF SUPERHIGH-FREQUENCY DISCHARGES TO OBTAIN TITANIUM NITRIDE POWDER"

Kiev, Poroshkovaya metallurgiya, No 3, 1972, pp 8-11

Abstract: A description is given of the equipment and the procedure for producing titanium nitride by hydrogen reduction of titanium tetrachloride in a nitrogen current heated in superhigh-frequency heater, reactor, and bubble-type chloride feeder. The overall conversion efficiency of $TiCl_4$ is as high as 100%. Ammonium chloride is the by-product. The powder obtained is 98% nitride and is close in composition to $TiN_{0.95}$ with a picrometric density of 5.11 g/cm^3 . It is finely dispersed and can be sintered at lower temperatures. Experimental sinters of the new powder at $1200\text{-}1300^\circ\text{C}$ and low pressures yielded high-strength specimens with 3-5% porosity. It is also readily compactable (three illustrations, 4 bibliographic references).

1/1

USSR

UDC: 621.313.12:538.4

KORYAGINA, G. M., Engineer, Moscow Engineering Economics Institute imeni S. Ordzhonikidze

"On the Thermodynamic Peculiarities and Power Efficiency of Using Oxygen-Enriched Air in Installations With MHD Generators"

Minsk, IVUZ Energetika, No 10, Oct 71, pp 77-82

Abstract: An analysis is made of the individual components of the formula for the efficiency of an electric power plant with MHD generator using oxygen. Consideration is given to four versions of initial conditions of comparison of the ideal cycles with MHD generators utilizing the products of combustion of natural gas with an oxidizer with various concentrations of oxygen. Comparative analysis shows the inefficiency of oxygen enrichment in the case of identical pressure and in the case of identical temperature preceding the MHD generator. Oxygen enrichment of air imparts an energetic effect in the case of constant temperature or electrical conductivity behind the channel of the MHD generator, which confirms detailed calculations of the thermal systems and of the MHD generators themselves. Two illustrations, bibliography of three titles.

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1/2 009

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--KINETICS OF IODOLACTONIZATION OF ANIONS OF ALKENE AND
ALKADIENECARBOXYLIC ACIDS -U-

AUTHOR-(03)-STANINETS, V.I., SHILOV, YE.A., KORYAK, G.B.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZH. 1970, 36(4), 363-7

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--REACTION KINETICS, ALKENE, DIENE, CARBOXYLIC ACID ESTER,
IODINE, LACTONE, CYCLIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO---FD70/605019/C01 STEP NO--UR/0073/T07036/004/0363/0157

CIRC ACCESSION NO--APC140914

2/2 009

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140914

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF ALKENE AND
ALKADIENECARBOXYLATE IONS WITH IODINE TO FORM CYCLIC IODOURIDONES IS
REPORTED (IONIC K SUB2 AT
20DEGREES IN L. MOLE NEGATIVE PRIME1 SEC NEGATIVE PRIME1, E SUBA KCAL
MOLE NEGATIVE PRIME1, LOG ALPHA, AND NO. OF ATOMS IN THE RING GIVEN:
(FORMULAS SHOWN ON MICROFICHE). THE DIFFERENCE IN RATES FOR I AND II IS
ATTRIBUTED TO THE NECESSITY OF CONVERTING I TO II BEFORE CYCLIZATION.
FACILITY: INST. ORG. KHIM. KIEV, USSR.

UNCLASSIFIED

USSR

UDC: 62-55

KORYAKIN, A. A. and SIV'KOVSKIY, O. B.

"Active High-Frequency RC Filter With Controlled Cutoff Frequency"

USSR Author's Certificate No 298059, filed 25 Apr 69, published
6 May 71 (from RZh-Avtomatika, telemekhanika i vychislitel'naya
tekhnika, No 12, 1971, Abstract No 12A156P)

Translation: The invention can be used in correcting automatic control system devices, principally in the low and infralow frequencies. The known active RC filters have controllable coefficients and variable transfer function bands in which the cutoff frequency of a high-frequency filter can be shifted by changing the amplification factor of the proper circuits through the control of potentiometers in the amplifier direct or feedback circuit. Here, the basic RC elements remain fixed; i.e., they are not used for direct control of the cutoff frequency. The circuit and the control process are complex. An active high-frequency RC filter with controllable cutoff frequency is proposed, containing an operational amplifier at the output with a capacitor and an RC T-bridge with series-connected resistors in a feedback circuit,
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USSR

KORYAKIN, A. A. et al., USSR Author's Certificate No 293059

and at the input an RC T-bridge with series-connected capacitors. To simplify the control process and increase the reliability of the device, control resistors, mechanically ganged, are used in both T-bridges. Resume.

2/2

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USSR

UDC 669.71.013.9.4

KIMSTACH, G. M., and KORYAKIN, G. I.

"Effective Refining of Aluminum Alloys"

Liteyn. proiz-vo, [Casting Production], No. 9, 1970, 15-14, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. 1, G160 by the authors).

Translation: Combined methods have been developed for refining of aluminum alloys with hexachloroethane in the furnace and liquid flux with overflow. This refining purifies the melts of solid and gaseous impurities most completely, increasing the physical, mechanical, and corrosion properties of the alloys.

1/1

- 13 -

USSR

UDC 669.71.018.9.4(088.8)

KIMSTACH, G. M., KORYAKIN, G. I., UTKIN, S. Ye., SOTNIKOVA, A. T.,
YEFIMOVA, A. Ya., and PROTAEV, V. M.

"Method of Refining Aluminum Alloys"

USSR Author's Certificate No. 265451, Filed 8/07/68, Published 23/06/70,
(Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract
No.1 G159 P).

Translation: In order to achieve simultaneous removal of gas inclusions
and nonmetallic impurities and to increase the effectiveness of refining,
the alloy is treated with hexachloroethane with a layer of liquid
refining flux on the surface of the bath.

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1/2 021

UNCLASSIFIED

PROCESSING DATE--16 OCT 70

TITLE--PREPARATION OF REFINED SECONDARY ALUMINUM ALLOYS IN A MACHINE
CONSTRUCTION SHOP -U-
AUTHOR-(05)-KINSTACH, G.M., UTKIN, S.YE., ZHELEZNVAKOV, L.R., KORYAKIN,
G.I., YEFIMOVA, A.YA.
COUNTRY OF INFO--USSR

SOURCE--LETEINCE PROIZVOD. 1970, (1), 10-11

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ALUMINUM ALLOY, SECONDARY METAL, MAGNETIC SEPARATION, METAL
REFINING, TECHNICAL STANDARD/(U)AL4 ALUMINUM ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/1380

STEP NO--UR/0128/70/000/001/0010/0011

CIRC ACCESSION NO--AP0116829

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--APO116829
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE ALLOYS WERE PREPD. FROM
AL TURNINGS (GRADE AL4) IN 2 STAGES: PRELIMINARY TREATMENT AND
REMELTING. THE PRELIMINARY TREATMENT CONSISTED IN SEPN. FROM DIRT ON
SCREENS, DRYING IN DRUMS AT 300-500DEGREES, AND MAGNETIC SEPN. FROM IRON
IMPURITIES. THEN THE TURNINGS WERE REMELTED IN AN INDUCTION CRUCIBLE
FURNACE. AT 740DEGREES, 1.5PERCENT FLUX (KCL 47, NaCl 30, AND Na Sub3
AlF Sub6 23WT.PERCENT) WAS ADDED, AFTER MELTING OF WHICH C Sub2 Cl Sub6
Was ADDED (IN 0.1PERCENT AMTS. FOR A TOTAL AMT. 0.7-0.8PERCENT). BEFORE
TAPPING LIQ. FLUX (KCL 47.5, NaCl 47.5, AND Na Sub3 AlF Sub6 5
WT.PERCENT) IN THE AMT. 2.5PERCENT OF THE METAL WAS ADDED INTO THE
LADLE. THE RESULTING MIXING DURING POURING RESULTED IN EFFICIENT
REFINING FROM IMPURITIES AND GASES, SO THAT THE RESULTING METAL
CORRESPONDED TO GOST STDS. FOR THE ORIGINAL AL4 METAL AND CONTAINED
GASES 0.10-0.12 CM PRIME3-100G WITH COMPLETELY PORE FREE TEXTURE.
AUTOMOBILE CYLINDER BLOCKS CAST WITH THE ADDN. OF 40PERCENT OF THIS
SECONDARY METAL WERE OF THE SAME QUALITY AS THOSE CAST FROM 100PERCENT
PRIMARY ALLOY AL4.

UNCLASSIFIED

12
UDC 537.591.15

USSR

VERNOV, S. N., Y'EGOROV, T. A., Y'EPIMOV, N. N., KOLOSOV, V. A., KORYAKOV,
Y. D., KRASIL'NIKOV, D. D., KULAKOVSKAYA, V. P., MAKSYMOV,
S. V., NESTEROVA, N. M., NIKOL'SKIY, S. I., ORLOV, V. A., SLEPTSOV, I. YE.,
SIZOV, V. V., KHRISTIANSEN, G. B., and SHAMSUTDINOWA, F. K.

"Preliminary Results of Recording Extensive Showers on a Recording Array in
Yakutsk"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 10,
Oct 71, pp 2098-2101

Abstract: Experiments are described in which attempts were made at determining the energy spectrum, composition, and anisotropy of cosmic rays within the range of energy 10^{17} to 10^{18} ev. It is desired to extend the range to cover 10^{19} ev and above. Of a particular interest are the following problems: do the rays originate within the Galaxy or in metagalactic regions, what is the direction from which they arrive, and how Čerenkov radiation produced by them is distributed within the atmosphere. The test equipment consists of 13 recording points distributed over an area of 3 km², with a central time control point. The output spectrum was measured over a period of 29.5 hours. 82 showers were noted during that period, with the axes falling within the

1/3

USSR

VERNOV, S. N., et al., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya,
Vol 35, No 10, Oct 71, pp 2098-2101

array area. The orientation of the axis was found by the "triangulation" method, comparing the time of arrival of the showers at different recording points. An analytic expression is given in the paper for the integral output spectrum of extensive showers at sea level for the interval of N between 2×10^7 and 2×10^8 . The intensity, determined with this formula, appears to be 2 to 3 times as great as recorded elsewhere. Distribution of Čerenkov light with respect to the shower axis was determined by observations conducted on clear, moonless nights. It was found to be similar to that of the primary gamma quanta, but it decayed with the distance from the axis more slowly than the amount of charged particles ($R^{-2.5}$ as against $R^{-3.3}$ for charged particles). The amount of charged particles lead to the conclusion that the electromagnetic component is responsible for 80% of it.

Examination of the energy spectrum of primary particles led to the conclusion that the electromagnetic component is responsible for 80% of it. Dependence of primary energy on the output N was established, and on the basis of this relation the integral spectrum was computed. The coefficient connecting these two magnitudes was found to be twice as high as the one previously accepted elsewhere.

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USSR

VERNOV, S. N., et al., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya,
Vol 35, No 10, Oct 71, pp 2098-2101

In the final analysis, variation of Cerenkov light at the primary particle energy of 3.6×10^{16} ev and the output (intensity) of 1.5×10^7 particles at sea level is given, as well as the expected distribution of the nuclear components of primary rays.

3/3

UDC 681.333

USSR

KORYAKIN, YU. M.

"A Device for Simulating Temperature Fields"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki, No 4, 1970, p 100, patent No 260974, filed 15 Nov 68

Abstract: This Author's Certificate introduces a device for simulating temperature fields which contains a grid, solution periodizing unit, polarized relays, and an indicator. As a distinguishing feature of the patent, the class of solvable problems is extended by providing each cell of the grid with a cathode follower whose input is connected to the junction point of the grid. Connected to the plate circuit of the amplification stage of the cathode follower are the windings of the polarization relays which connect additional resistors and capacitors to the resistors and capacitors of the grid through contacts.

1/1

USSR

UDC 617-001.17-07:[612.118.24+616.5-002.157-003.2

KORYAKINA, I. K., GORBUNTSOVA, R. V., GERASIMOVA, L. I., and MURAZYAN, R. I.,
Pathophysiology Laboratory and Surgical Department, Central Institute of
Hematology and Blood Transfusion, Ministry of Health USSR, Moscow

"Comparison of the Toxicity of Blood Serum and Contents of Blisters in Burn
Victims"

Moscow, Problemy Gematologii i Perelivaniya Krovi, No 5, 1971, pp 44-46

Abstract: The toxicity of serum and exudate from blisters of persons suffering from burns covering 10 to 75% of the body surface was studied by the hemoculture method (leukocyte film). Activity was assessed from the extent of leukocyte migration after the cultures were incubated at 37°C for 18 hours. (Serum from healthy persons stimulates leukocyte migration). Fluid obtained from blisters within a few hours of the burn had a pronounced toxic effect on the hemocultures (-30, but serum from the same patients was much less toxic (-6) and in some cases had no effect at all. In one case (the burn affected 30% of the body surface), the blister fluid inhibited leukocyte migration (-33) while serum obtained at the same time slightly stimulated it (+4). Since the difference between the toxicity of serum and blister contents

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USSR

KORYAKINA, I. K., et al., Problemy Gematologii i Perelivaniya Krovi, No 5,
1971, pp 44-46

diminished steadily with time, it is suggested that prompt removal of blis-
ters is a worthwhile therapeutic procedure because it eliminates one of the
sources of intoxication associated with burns.

2/2

- 47 -

USSR

UDC 576.3:612.017:615.5

KORYAKINA, YE. D.

"A Possible Mechanism Increasing the Heat Resistance of Muscles Under Stress",
PP 55-57, Sintez Belka i Rezistentnost' Kletok, (Protein Synthesis and Cell
Resistance), Leningrad, "Nauka," 1971, 104 pp

Abstract: A preliminary stress effect on a frog (electrical stimulation of the rear extremity) or an injection of dibazole (0.1 mg/kg) causes an increase in the heat resistance of mm. sartorii. These muscles incorporated C¹⁴-leucine more intensively when exposed to 36°C temperature for 15 minutes. It was shown that the increase of heat resistance of muscles is weakened or reduced by inhibiting the protein synthesis with chloramphenicol. On the basis of the data obtained, it can be assumed that one of the possible mechanism of increasing cell resistance under stress may be the intensification of protein synthesis by "stress hormones."

1/1

USSR

UDC 576.3:612.017:615.5

YERMAKOVICH, A. P., KORYAKINA, YE. D., and ROZIN, M. A.,

"The Possible Significance of Protein Synthesis in the Repair Mechanism of Nerve Cells After Damage", pp 14-18, Sintez Belka i Resistentnost' Kletok, (Protein Synthesis and Cell Resistance), Leningrad, "Nauka," 1971, 104 pp

Abstract: By means of vital staining with methylene blue (0.01 %), it was shown that the percentage of damaged parasympathetic nerve cells declined with the passage of time after a 5-minute injury of isolated frogs auricles with distilled water. This process was suppressed by inhibitors of protein synthesis puromycin ($5 \cdot 10^{-5}$ g/ml) and chloramphenicol ($2 \cdot 10^{-5}$ g/ml) and was intensified by dibasol ($1 \cdot 10^{-7}$ g/ml). The role of protein synthesis is observed in the repair mechanism of nerve cells after damage.

1/1

- 118 -

USSR

UDC 539.3

KORYAKOVA, O. L.

"Solution of Axisymmetric Problems in Calculating a Mesh Hollow Spherical Shell"

V sb. Raschet prostranstv. sistem v stroit. mekh. (Calculation of Three-Dimensional Systems in Structural Mechanics -- Collection of Works), Saratov, Saratov University, 1972, pp 124-127 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V157)

Translation: A mesh spherical hollow shell made up of two systems of diagonals spiraling toward a band and a system of rings is continued on the basis of the relationships of elasticity and differential relationships of the theory of hollow shells. A resolving system of six first-order differential equations with variable coefficients and the corresponding equation for free oscillations and stability are obtained. The solution of the boundary value problem is reduced to a solution of the Cauchy problem. The compiling and practical achievement of a computer algorithm are described.

Abstracter's note. The shapes of the free oscillations and the shapes of the stability losses of the system studied are not limited to axisymmetric and continualization in general loses meaning under a large number of waves.

Ya. B. L'vin.

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AA0040779 KORYAKOVSKIY O. A.

WR 0482

1970

Soviet Inventions Illustrated, Section I: Chemical, Derwent,

240889 RESISTANCE SPOT WELDING was improved by continuous measurement of resistance between welding electrodes 1. In this method two sheets of metal are pressed between the electrodes with a force P and subjected to ultrasonic vibrations using a generator 4. The resistance between the electrodes is continuously measured by a unit 2 which at the optimum value of this resistance actuates a controller 6 to switch welding current for a given time interval. The value of the optimum resistance and other parameters of the welding process depend on the type and state of the welded sheets and on the welding equipment used.
15.9.67 as 1186067/25-27. S.F. GUSEV et al.
(22.8.69) Bul 13/1.4.69. Class 11b. Int.Cl.B 23k.

AUTHORS: Gusev, S. F.; Koryakovskiy, O. A.; and Sidynkin,

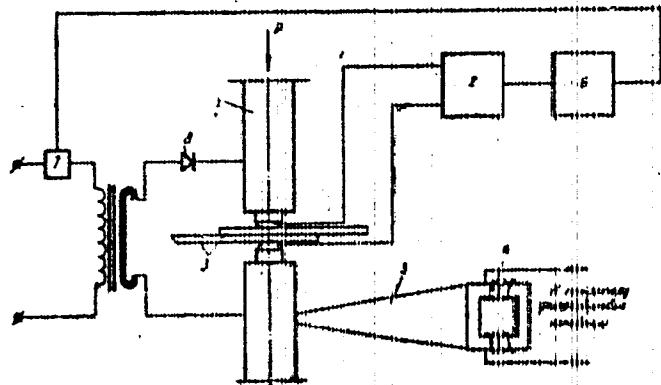
V. A.

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"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002201510014-5

AA0040779



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APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002201510014-5"

Physical Properties

USSR

UDC 669.295.5.018.29:669.018.2

NEYMARK, B. YE., KORYTINA, S. F., MONINA, E. F., and MERKUL'EV, A. N.

"Experimental Study of the Physical Properties of Alloys Based on Type VT-5 and VF8 Titanium"

V. sb. Teplofiz. Svoystva tverd. veshchestv. M. Nauka (Thermophysical Properties of Solid Materials -- Collection of Works), Moscow, "Nauka," 1971, pp 71-80 (from Referativnyy Zhurnal -- Metallurgiya, No 6, Jun 71, Abstract No 6I663)

Translation of Abstract: Experimental studies were carried out on the physical properties of two Ti alloys: VT-5 and VT-8. The properties studied were: normal modulus of elasticity (by dynamic method), internal friction by attenuation of free vibrations of the samples, heat conductivity, electrical resistance, Lorentz Number (by the method of Jaeger-Deissel horst), linear coefficient of expansion (in a vacuum dilatometer), density and heat capacity in the temperature range of 20-800°. (Two illustrations, one table, 5 bibliographic entries).

1/1

USSR

GOL'DANSKIY, V. I., KORYTKO, L. A., Institute of Chemical Physics, Academy of Sciences of the USSR

"Concerning the Development of Asymmetry in Mössbauer Spectra as a Consequence of Diffusion Anisotropy"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 17, No 6, 20 Mar 73, pp 317-320

Abstract: It is shown that anisotropic diffusion of Mössbauer atoms under certain conditions may lead to a new type of asymmetry in the γ -resonance spectra of polycrystalline specimens -- differences in broadening of the lines of the quadrupole doublet or the components of the magnetic hyperfine structure. This effect may be of use in studying the diffusion of surface atoms, motion in zeolite channels, Brownian movement of nonspherical particles in liquids, diffusion of protein globules, and so forth. In addition, this effect must be taken into consideration when calculating the coefficients of diffusion in such systems from experimental spectra.

1/1

USSR

KORYTNAYA, L. A., ALEKSANDROV, V. YA.

"Programmed Device for Detecting Failures in Digital Computers"

USSR Author's Certificate No 370609 (from Otkrytiya, Izobreteniya, Promyshlennye obraztsy, Tovarnye znaki (Discoveries, Inventions, Industrial Models, Trademarks), No 11, 1973, page 152)

Translation: This programmed unit for detecting failures in digital computers contains a commutation module and a signal analysis and recording module which includes the matrix for recording the operating signals, the matrix for recording noise, the decoder controlling the matrices and a counter of the number of the monitored element connected to the decoder. The device is distinguished by the fact that in order to increase the reliability of a digital computer it contains a module for control code output, a control module, counting microcycles and an output module. The outputs of the control code generation module are connected to the code buses of the digital computer, the inputs of the microcycle counter and the output module, the outputs of the microcycle counter are connected to the inputs of the control code generation module and the output module, the outputs of which are connected to the inputs of the control module connected to the inputs of the control code generation module,

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USSR

KORYTNAYA, L. A., ALEKSANDROV, V. YA., USSR Author's Certificate No 370609,
No 11, 1973, p 152.

the microcycle module, the output module, the module for signal analysis and recording and the commutation module, the outputs of the signal analysis and recording module are connected to the inputs of the control module and the output module, the outputs of the commutation module are connected to the inputs of the control module, the signal analysis and recording module and the output module, and the inputs of the commutation module are connected to the control points of the monitored elements of the digital computer.

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- 139 -

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AN0026669

UR 0533

AUTHORS-- KOVALEVA, M., PROFESSOR, AND KORYTOV, K., CANDIDATE
OF ECONOMIC SCIENCES

TITLE-- ERRONEOUS POSITIONS

NEWSPAPER-- SOTSIALISTICHESKAYA INDUSTRIYA, MARCH 5, 1970, P 2,
COLS 5-8

ABSTRACT-- THE ARTICLE IS A REVIEW OF THE "FORMS OF INDUSTRIAL MANAGEMENT", A BOOK AUTHORED BY B. V. RAKITSKIY. ACCORDING TO THE REVIEW, RAKITSKIY DOUBTS THE VALIDITY OF THE CENTRALIZED PLANNING IN GENERAL, INASMUCH AS IT, IN HIS OPINION, IS INHERENT ONLY TO "UNBALANCED", BACKWARD ECONOMY. UNDER THE PRESENT DAY CONDITIONS, WRITES RAKITSKIY, "THE FUNCTION OF THE EXCHANGE CONTROL CEASES TO BE THE FUNCTION OF SPECIAL CENTRAL AGENCIES". HE LOOKS UPON THEM ONLY AS "ARBITERS". RAKITSKIY, CLAIMS THE REVIEW, ADVOCATES THE NEED FOR COMPETITION BASED ON FREE CHOICE OF BUSINESS PARTNERS AND UNRESTRICTED PRICES AT LEAST "WITHIN THE SPECIFIED RANGE".

IN CONCLUSION, THE AUTHORS OF THE REVIEW EXPRESS THEIR BEWILDERMENT AS TO WHY THE PUBLISHING HOUSE "NAUKA" HAS PUBLISHED THE BOOK.
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19661718

30

sw

1/2 045
TITLE—PLASMA CUTTER -U-

UNCLASSIFIED

PROCESSING DATE--09OCT70

AUTHOR—(03)—KORYTOV, O.V., UZILEVSKIY, YU.A., DENISOV, V.I.

COUNTRY OF INFO--USSR

K

SOURCE--136688

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVERNYE ZNAKI, NR 7
DATE PUBLISHED--17JUN69

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--METALLURGIC PATENT, PLASMA ARC CUTTING, NOZZLE, HEAT RESISTANT
MATERIAL, UNDERWATER CUTTING

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0001

STEP NO--UR/0482/69/000/000/0000/0000

CIRC ACCESSION NO--AA0115801

UNCLASSIFIED

2/2 045

CIRC ACCESSION NO--AA0115801

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. PLASMA CUTTER IS USED MAINLY FOR UNDERWATER SERVICE AND FOR GREATER SAFETY AND BETTER CUTTING, THE UNIT SUPPLYING THE ELECTRICALLY CONDUCTIVE LIQUID IS A CHAMBER WITH A SPRING LOADED PLUNGER MOUNTED ON TOP OF THE CUTTER CASING. THE CHAMBER HAS AN INLET VALVE (6) AND AN OUTLET VALVE (7) COMMUNICATING WITH A PIPE INSIDE THE FORMING NOZZLE (12). THE NOZZLE IS MADE OF NONCONDUCTIVE HEAT RESISTANCE MATERIAL, BUT ON ITS END THERE IS A REPLACEABLE JET (13) OF CONDUCTIVE MATERIAL (E.G. COPPER) TO STRIKE A STEDDY ARC. THIS IS HEAVILY FINNED ON ITS OUTSIDE.

UNCLASSIFIED

Acc. Nr: AP0047239

KORYTOVA

L.I.

Ref. Code:

UR0606

PRIMARY SOURCE: Urologiya i Nefrologiya, 1970, Nr 1,
PP 26-31

DIAGNOSTIC SIGNIFICANCE OF RADIOISOTOPIC METHODS IN EXAMINATION OF
PATIENTS SUFFERING FROM NEPHROLITHIASIS

N. K. Gorbadeff, A. M. Gasparyan, L. I. Korytova

Summary

During dynamic examination of 348 patients suffering from nephrolithiasis the authors established the significance of isotopic methods of investigation in determination of the functional condition of the kidneys, depending on the severity and duration of the disease, the presence of concomitant complications and localization of the stone. On the basis of observations the authors recommend employment of isotopic methods in complex examination of urological patients.

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REEL/FRAME
19790746

-D.I. 2

Coatings

USSR

UDC 678.742:673.01:53

KORYUKIN, A. V., KOROLEV, A. YA., REYTLINGER, S. A., and A GUDIMOV, M. H.,
All-Union Institute of Aviation Materials

"Effect of the Adhesion Properties of a Polymer on the Formation and Gas
Permeability of Metallized Polymer Films"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 9, No 6, 1973, pp 53-55

Abstract: A study was made of the gas permeability of metal coated polymer films, and the relationship of gas permeability to the magnitude of adhesion of the metal layer to the polymer film was established. Aluminum coatings were deposited on inert polymers PTFE (polytetrafluoroethylene) and (polyethylene) PE and polar polymers PI (polyimide) and (polyethyleneterephthalate) PETF where it was noted that the coefficient of gas permeability of the aluminum coating was on the order of 1-3 times greater for the inert polymers, which leads to the conclusion that inert polymers are more porous. The greatest aluminum coating adhesion strength was noted on the polar polymers (43.0 kgf/cm² for PETF and 20.7 kgf/cm² for PI). The low adhesive strength of aluminum coatings on PTFE and PE polymers is due to the ease with which the metal atoms can migrate to the substrate surface and form coarse

USSR

KORYUKIN, A. V., et al., Fiziko-Khimicheskaya Mekhanika Materialov, Vol 9,
No 6, 1973, pp 53-55

crystal structures with increased porosity. The adhesive strength of Al
films on inert polymers can be increased by modifying (chemically) the sur-
face layer on PTFE with a sodium-naphthalene complex and PB --- with a
chromium mixture to make the surface of these polymers functionally
adhesively active. Two tables, seven bibliographic references.

2/2

- 6 -

Acc. No: A70107996 Abstracting Service: 6-70 Ref. Code: 44P0020

124952t Effect of the magnetic treatment of water on the concentration of dissolved oxygen. Klassen, V. I.; Shafeev, R. Sh.; Khaghinskaya, G. N.; Koryukin, B. M.; Strelkova, S. A. (Inst. Goryuch. Iskop. Moscow, USSR). Dokl. Akad. Nauk SSSR 1970, 190(6), 1391-2 [Phys Chem] (Russ). The effect of passing H₂O through 10 magnetic fields on the effective concn. of O₂ in soln. was detd. After 5 min, O₂ increased. This increase was most pronounced when the initial O₂ was lowered by bubbling N through the H₂O. Increasing the period between the end of the magnetic treatment and the addn. of pyrogallol lowered O₂. GBJR

REEL/FRAME
19891576

UDC 548.52

USSR

BEREZKOVA, G. V., TSVERNOVA, I. N., ZAKHAROV, N. D., BOGDANOV, V. N.,
and KORYUTIN, V. I., Institute of Crystallography, Academy of Sciences USSR

"Growth Mechanisms of AlN Whiskers"

Moscow, Kristallografiya, Vol 16, No 5, Sep-Oct 71, pp 978-981

Abstract: The article describes results of a study of AlN whisker growth under isothermal conditions during the reduction of aluminum oxide with simultaneous nitration. The whiskers were grown in a horizontal graphite furnace in a flow of commercial nitrogen from an Al_2O_3 charge at 1950-1970° C. The resultant specimens were studied in a scanning and a transmission electron microscope and their brittle strength measured at room temperature. The results indicate both top growth from the vapor phase and bottom growth from the melt. In neither case is the presence of an axial screw dislocation a necessary condition for crystallization in whisker form. The article discusses possible growth mechanisms.

1/1

Acc. Nr: APO047373

KORYUKIN R. //

Code: URO589

PRIMARY SOURCE: Vestnik Khirurgii imeni I. I. Grekova, 1970,
Vol 104, Nr 1, pp 107-111

THE EFFECT OF VARIOUS METHODS OF PREMEDICATION ON SOME
NEURO-ENDOCRINOUS REACTIONS IN SURGICAL PATIENTS

By V. A. Leosko, V. E. Ryzhenkov, G. L. Kotomina, V. M. Koryukin and M. P. Rotenberg

In 166 surgical patients the effect of various combinations of preparations used for premedication has been studied. The data obtained enabled the authors to recommend the authors a more wide use of cholinolytics of central action in a complex of premedication agents.

11:

10/11

REEL/FRAME

19790899

2

1/2 C19 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--IONIZATION AND STABILIZATION OF TRITIUMGERMANIC AND
TRIGALLATEGERMANIC ACIDS -U-
AUTHOR--(02)-ANURIANOV, A.M., KORYUKOVA, V.P.

K

COUNTRY OF INFO--USSR

SOURCE--ZP. NEORG. KHIM. 1970, 15(2), 445-9

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IONIZATION, IONIC BONDING, GERMANIUM COMPOUND, IRON COMPOUND,
GALLIUM COMPOUND, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1702

STEP NO--UR/0078/10/015/002/0445/0449

CIRC ACCESSION NO--AP0125323

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--20 NOV 70

CIRC ACCESSION NO--AP0125323

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT IONIC STRENGTH EXTRAPOLATED TO
0, THE INSTABILITY CONSTS. OF ANION COMPLEXES OF THE TITLE ACIDS ARE
1.30 TIMES 10 PRIME13 NEGATIVE AND 1.42 TIMES 10 PRIME12 NEGATIVE, RESP.
IN DILD. AQ. SOLNS.. THESE ACIDS ARE COMPLETELY IONIZED. THE STUDY
HAS PERFORMED POTENTIOMETRICALLY.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--IONIZATION AND STABILITY OF TANNINGERMANIC ACID -II-

AUTHOR--(02)--ANDRIANOV, A.M., KORYUKOVA, V.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHM. 1970, 15(2), 450-4

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--TANNIC ACID, GERMANIUM COMPOUND, COMPLEX COMPOUND, CHEMICAL STABILITY, IONIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0817

STEP NO--JR/0078/10/015/002/0450/0454

CIPC ACCESSION NO--APIO136251

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0136251

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT 25DEGREES, COMPARATIVE
POTENTIOMETRIC TITRN. PROVED A COMPLETE 1ST IONIZATION OF THE ACID.
THE 2ND IONIZATION CONST. IS 6.10 TIMES 10 PRIME NEGATIVE 3.
INSTABILITY CONST. OF TANNIN GE COMPLEX AT 25DEGREES IS 7.85 TIMES 10
PRIME NEGATIVE 8.

UNCLASSIFIED

Microbiology

USSR

UDC 614.3/.4.07

RYZHIKOV, M. I., KORZENKO, V. N., and GRACHEV, YU. A., Ministry of Health
Belorussian SSR, Republic Sanitary-Epidemiological Station, and Minsk Pedago-
gical Institute imeni A. M. Gor'kogo

"Some Problems Concerning the Preparation of Bacteriological Laboratories
for Detection of Bacterial Substances"

Minsk, Zdravookhraneniye Belorussii, No 1, Jan 71, pp 67-69

Translation: Bacteriological weapons, regarded as one of the most powerful means of mass infection of people, have been accepted as armament by aggressive factions of a number of capitalist states. Foreign investigators consider that the agents of especially dangerous infections such as plague, cholera, glanders, melioidosis equine encephalomyelitis, and other diseases can be utilized as bacteriological weapons. It is the opinion of foreign specialists that the infection of the earth's atmospheric layers is the most likely and effective method of bacteriological attack.

The identification of the type of agent in the least time is the basis for the implementation of a whole series of measures aimed at localizing and eliminating the developing foci.

The successful elimination of the consequences of infection depends on
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USSR

RYZHIKOV, M. I., et al., Zdravookhraneniye Belorussii, No 1, Jan 71, pp 67-69

the quantity and quality of the studies conducted, and on the participation of a considerable number of laboratories in the deflection work.

This is the task that confronts the rayon, municipal, and oblast sanitary epidemiological stations, the bacteriological laboratories of institutes and certain hospitals, and veterinary laboratories of practical and scientific research institute (D. I. Lazarika, 1966). In view of the fact that the republic is not plagued by highly dangerous infections, no effort to control their agents is made at the laboratories, with the result that most of the laboratories are not equipped to work in the regime required for especially dangerous infections.

For this reason it is considered advisable to adopt beforehand some basic measures for the development of a laboratory. These measures consist of the elaboration of a plan for the development of a laboratory, with provisions for carrying out supplementary work, such as the equipping of additional isolation wards and rooms, erection of partitions and passages, and so on. In addition, reserves of necessary diagnostic preparations and other supplies must be created and facilities organized which make it possible to obtain these supplies at the needed moment. Specialists must be trained to work under pressure conditions and apply methods of investigation appropriate to the required task.

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- 16 -

USSR

RYZHIKOV, M. I., et al., Zdravookhraneniye Belorussii, No 1, Jan 71, pp 67-69

General requirements for the organization of a work regimen in separate corresponding laboratories are clarified in the literature (V. N. Fedorov, 1953; P. F. Zdrodovskiy and Zhukov-Verezhnikov, 1966, and others) and there are also instruction materials on plague, cholera, and smallpox. These materials however, fail to treat the work regimen in laboratories which are engaged in complex studies, such as bacteriological and virological investigations (these are not supported by descriptions of the order and stages in which investigations are to be conducted). A summary of literary data on the organization of work at the best laboratories, and the experience accumulated by us in the matter of developing laboratories at appropriate premises permitted us to develop a number of recommendations.

In case it is necessary to launch immediate investigations (delivery of a test sample to the laboratory), a step-wise approach to the work by the different functional sections of the laboratory is advisable which ensures orderly stages in the conduct of the investigations. The premises in which the laboratory is situated are divided into two halves; the infectious and the clean. Then there are sections which make it possible to begin work with a minimum time loss; a room for the primary processing of material and preparation of the test samples for further investigation; an isolation ward
3/6

USSR

RYZHIKOV, M. I., et al., Zdravookhraneniye Belorussii, No 1, Jan 71, pp 67-69

or room for the infection and housing of test animals; and a room to carry out express methods of investigation (boiler room). Located in the second half are the "clean" laboratory, an autoclave for infected material, dissection room, sanitary conveyer, and others. The work in these sections can be carried out by less skilled laboratory personnel working under the supervision of specialists.

The volume of work that can be accomplished at a given laboratory is based on the resources and means which are available. The volume of investigations is determined by the task assigned to the laboratory and the availability of the diagnostic preparations and equipment; at the same time separate calculations are made of the number of test samples that can be investigated by the express, accelerated, and classical methods. On the basis of these calculations, the total number of test samples which can be accepted for investigation in a single work day is determined, taking into account the possibility of grouping some of the test samples.

The completed calculations make it possible to determine the kind and quantity of supplies which should be utilized at each of the investigating stages. A list of instruments, laboratory vessels, reagents, bacterial preparations, and so on is used to provide each of these stages with the

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necessary supplies. In the case of a shortage of some of these supplies or the inadvisability of storing them, the list should specify where such supplies may be obtained.

In order to expedite the conduct of investigations, a plan of work for each stage of the investigation and a general plan for the handling of the material delivered to the laboratory should be prepared, because the use of handbooks and manuals in the course of work with especially dangerous infections is difficult and takes up a great deal of time. Such plans necessary for each stage of preparation of the test samples for further investigation at the biological testing premises, pure laboratory, boiling room, and so on.

The plan for the stage in which the test samples are prepared for investigation should anticipate the preliminary processing of the material (trituration, emulsification, filtration, and so on) and its separation into parts for further special processing (centrifugation, filtration through membrane filters, heating, and so on). The plan should indicate also the separate work stages for each part of the test sample: preparation of smears, quantity, staining methods, and nutrient media to be used; it should also indicate the species and number of laboratory animals used and the methods of infection; also the type of material, the time it is examined, the kind

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of medium used for reinoculation, and the time at which the reinoculation is done.

Particular attention should be given to the composition and preparation of nutrient media, the order of their completion, and delivery in accordance with the investigating plan. Brief instructions outlining the order at which the work is to be done should be available at all stages.

Practical work habits for each state of the investigation are being developed in the course of the training instructions. The completion of the preparations and the development of the laboratory in accordance with the plan and taking into consideration local characteristics will help in the proper organization of work at the most critical period -- the initial 1-2 hours after receipt of the assignment to detect bacterial substances.

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1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--EPIDEMIOLOGIC PECULIARITIES OF BRUCELLOSIS IN PEOPLE INFECTED BY
CATTLE IN BYELORUSSIA -U-
AUTHOR--KORZENKO, V.N.

COUNTRY OF INFO--USSR *K*

SOURCE--ZDRAVOKHRANENIE BELORUSSII, 1970, NR 2, PP 73-75

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--EPIDEMIOLOGY, BRUCELLOSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1524

STEP NO--UR/0477/70/000/002/0073/0075

CIRC ACCESSION NO--AP0109584

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109584

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ROLE OF SEX, AGE, PROFESSION, THE DEGREE AND DURATION OF A CONTACT WITH THE SOURCE OF INFECTION IN APPEARING CLINICAL SYMPTOMS OF BRUCELLOSIS IN PEOPLE INFECTED BY THE CATTLE IS SHOWN, BASING ON THE ANALYSIS OF THE CLINICO EPIDEMIOLOGIC, IMMUNOLOGIC AND EPIZOOTHIOLOGIC DATA. FARMS, MEAT COMBINES, COWS OF INDIVIDUAL HOUSE KEEPERS PLAY A CERTAIN ROLE IN AFFECTING PEOPLE BY BRUCELLOSIS.

UNCLASSIFIED

USSR

K UDC 616.931.42-022.39-0 J6.2 (476)

KORZENKO, V. N., Belorussian Scientific Research Institute of Epidemiology and Microbiology

"Epidemiological Characteristics of Brucellosis in People Infected by Cattle"

Minsk, Zdravookhraneniye Belorussii, No 2, 1970, pp 73-76

Abstract: Analysis of more than 500 case histories, outpatient cards, and epidemiological survey reports showed that 60% of the brucellosis patients in Belorussia worked on infected farms, 14% were private owners of diseased cows, 12.4% were veterinary technicians, and 7.6% worked in meat-packing plants. Some 37% had contact with aborted fetuses, placenta, amniotic fluid, etc. Many others contracted the disease after handling the carcasses of diseased animals. Brucella was transmitted through the skin in 40% of the cases, digestive tract in 25%. The duration of contact with the source of infection prior to manifestation of the clinical symptoms ranged from 1-2 weeks to 16 years. The victims were predominantly adults whose jobs entailed touching the animals. Cases of the disease were reported throughout the year, but the peak occurred during the first trimester.

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Epidemiology

USSR

UDC 616.981.455-084(476)

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"Prophylaxis of Tularemia in Belorussia"

Minsk, Zdravookhraneniye Belorussii, Vol 17, No 6, Jun 71, pp 47-48

Abstract: Studies conducted in Belorussia during the past 25 yrs indicated that, among cases of tularemia recorded in the enzootic area, 80-95% and 5-20% occurred among inhabitants of the country and of cities, respectively. The incidence of the disease was 25 times lower in cities than in the country. Country inhabitants were infected mainly while gathering hay or catching water voles (*Arvicola terrestris*), while city inhabitants contracted the disease during vacations in the country. The disease was mostly communicable (in 32.3-75% of cases), but in 1962-63 54.8% of cases occurred as a result of contact with contaminated water. Infection by the respiratory route occurred only in 1951 in connection with winter threshing of rye. It is necessary to immunize against tularemia both the country population and city inhabitants who spend any time in country areas in which tularemia is enzootic. At present the ratio of those who have not been immunized in the population subject to immunization is too high (25-40% in individual rayons). One of the reasons

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for this is that no distinction is made between temporary and permanent contraindications. In some cases in which coverage of the population by immunization was complete, tularin tests indicated that the ratio of persons developing immunity following vaccination was too low. This ratio was 35-38.4% in some medical districts of Gomel' and Minsk oblasts 1-2 yrs after immunization, while it was 97-97.5% in the neighboring districts. The reasons for the low ratio in some medical districts were use of improper procedures in administering the vaccine and storing it before immunization. Practical experience shows that immunity lasts for 5 yrs or longer whenever the vaccine has been applied correctly according to directions. It would be best to use the method of cyclic immunization of the total population of enzootic zones during a calendar year. This method (Pilipenko et al, Zh. Mikrobiol., Epidemiol. i Immunobiol. No 6, 25, 1964) has been successfully applied in Stavropol' Kray and elsewhere in the RSFSR. In subsequent years only arrivals from areas in which there is no tularemia and children who have reached the age of 7 yrs are immunized. Reimmunization of the total population is carried out 5 yrs later. In establishing whether or not tularemia is enzootic in any area, it is of
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